

## **REMARKS**

### **Rejections under 35 USC § 112, second paragraph**

Claims 21 and 23 are rejected as having insufficient antecedent basis for the specifically claimed isomers of the earlier recited compounds. Applicants respectfully disagree. Claim 1 encompasses all isomers of the named compounds, while claims 21 and 23 name some specific isomers of the same compounds.

Applicants respectfully disagree with the rejection of Claim 22. Because claim 22 depends from claim 1, it is by definition clear that the glutamic acid derivatives can only be derivatives of the compounds specified in claim 1.

### **Rejections under 35 USC § 103**

Claims 1, 4, 6 and 14-23 were rejected as allegedly unpatentable over Koppel, US 5,358,720, in view of Bailey, US 5,997,915.

Koppel is directed to a regimented therapeutic method for the alleviation of arthritic conditions by orally administering a selective combination of vitamins and minerals in scheduled dosage amounts. See abstract, for example.

A reference is non-analogous art if it is neither within the inventor's field of endeavor nor reasonably pertinent to the particular problem with which the inventor was involved. The Federal Circuit in *In re Clay*, 23 USPQ.2d 1058 (1992), stated that a prerequisite of an obviousness determination is to define the art which the subject matter sought to be patented pertains, i.e., whether it is analogous art, i.e., whether the art is too remote to be treated as prior art. The two criteria identified were whether the art is from the same field of endeavor, or whether the reference, if not in the same field of endeavor, still is reasonably pertinent to the particular problem with which the inventor is involved.

The court in *Clay* held that a prior art reference could not be considered to be in the same field of endeavor as the field of the invention merely because they both relate to the petroleum industry. Similarly here, Koppel cannot be said to be in the same field of endeavor as the present invention merely because both relate to pharmaceutically beneficial compositions. Koppel teaches compositions that are useful for the treatment of "certain inflammatory disorders" and more particularly for the alleviation of arthritic conditions. The present invention is directed to compositions useful for the treatment and prevention of transmethylase disorders, preferably cardiocascular diseases such as atherogenic and

thrombogenic diseases. One of ordinary skill in the art working in the field of transmethylation disorders as described above, would have lacked the motivation to consider the teachings of the reference that is directed to the treatment of certain inflammatory disorders and more particularly for the alleviation of arthritic conditions.

Whether the references are reasonably pertinent to the particular problem with which the inventor is involved also requires a look at the purpose of the prior art inventions. If the references are directed to a different purpose than the current invention, the inventor would accordingly have had less motivation or occasion to consider them. Koppel clearly addresses a problem far and remote from the problem addressed by the present invention. Thus, there is no motivation or occasion for one of skill in the art to consider it. A person of ordinary skill in the art would not reasonably have expected to solve a problem relating to transmethylation disorders by considering a reference dealing with inflammation.

Accordingly, Koppel is not proper prior art against the present invention and therefore the rejection is improper.

Additionally, even if an artisan would have looked at the teachings of Koppel, he/she would have encountered the teachings on column 3, lines 4-6, which teach that one of the principal components of the regiment, i.e., niacin, has "histamine releasing properties and ability to increase blood flow [and] play[s] a critical role in its therapeutic effectiveness." Koppel also teaches that when the dose of niacin is high, a "niacin flush" effect is experienced by patients, which is believed to be caused by the vasolidator and histamine releasing effects of niacin, and is accompanied by a tingling and itching sensation and by reddening of the face and other body parts. See column 2, lines 43-52. One of ordinary skill in the art working in the art of transmethylation disorders, especially hypersensitive patients suffering from vascular diseases, would have dismissed the reference as teaching compositions that have undesirable effects in the patients of interest.

Furthermore, even if the above would not dissuade an artisan from considering the teachings of the reference, said artisan would have lacked the motivation for the selection of the components of the present invention. Koppel teaches that the composition therein should "consist[ing] essentially of about 25-100 mg of nicotinic acid administered three times per day, about 200-1000 mg of calcium ascorbate administered three times a day, and a single dosage form of a copper-free multivitamin with multiminerals to be taken once a day." See column 2, lines 14-19. The multivitamin-multiminerals supplement is taught to be "any such high potency dietary formula which does not contain copper." (Emphasis Added.) See

column 3, lines 37-40. Thus, one of ordinary skill in the art would readily recognize that nothing particular is attributed to any one component of the multivitamin-multiminerals supplement as "any" will do as long as it does not contain copper. As it happens, the multivitamin-multiminerals compositions described with more particularity contain Rutin, Betain HCl and Folic Acid among a large list of other components. See column 3, line 49 to column 4, line 55. Nothing in the reference teaches or suggests that compositions that contain these three particular components have anything special about them. Nothing in the reference teaches or suggests that these three components out of the many are of any special importance and/or that their presence in any one composition is important or that their bio-availability, more specifically of folic acid, should be improved or even assured.

Even assuming that one of ordinary skill in the art would have selected the specific vitamin compositions that contain the three particular components discussed above, nothing in the reference suggests that folic acid out of the many components should be modified. Each of the two compositions in the tables on columns 3 and 4 contain 28 components. One of ordinary skill, without particular motivation to modify the folic acid component therein, even if motivated to make modification generally, would have had to figure out the possible modifications for each of said components, which additively are numerous, and then make a selection for a modification where folic acid is modified. Without specific motivation, one of ordinary skill in the art would not have gone through this exercise.

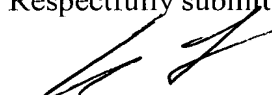
Bailey is directed to compositions for supplying folate for human or animal consumption. See abstract, for example.

There is no apparent reason why one of ordinary skill in the art would combine the teachings of these two references. The law requires that the prior art contain motivation to combine the references together to arrive at the claimed invention, and not that elements of the invention can be piecemealed together from prior art references. "The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." See *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

It is respectfully submitted that the cited references fail to provide sufficient motivation, which would lead one of ordinary skill in the art to modifications of the compositions of Koppel in such a manner as to arrive at the invention according to the current application. The cited references therefore fail to render applicant's invention obvious. Reconsideration of the rejection is thus respectfully requested.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



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